



HERMISTON AGRICULTURAL RESEARCH & EXTENSION CENTER

Pivotal Moments

A Quarterly Newsletter for
Friends of HAREC



SUMMER 2019

From the Director

By Philip B. Hamm

Farewell!

As my time winds down (Aug 31st) as a member of OSU's faculty, I have mixed feelings on saying goodbye. 44+ years with OSU sure went by quickly & I am looking forward to retirement, but also already missing the position I have had for so long. I am not going to miss the long days and emails that I have to respond to even while on vacation, but **I will miss all the people I have had such a privilege and honor to know first, then serve and who later became friends!**

Thanks to all of you - you made my job both enjoyable and rewarding. So many people through the years, I can't name them all!

I do want to mention and thank Bryan Wolfe, serving as Chair of the Station's Advisory Committee for many years. The past and present faculty and staff at HAREC, who without a doubt, are the best folks anywhere.

A special thank you to Peggy Carr, Tim Weinke and Annette Teraberry who do or have served HAREC for many, many years.

I also want to thank those laboratory managers who worked for me over the years; Joy Jaeger, Stacy Gieck, Jordan Eggers and Robert Cating.

I owe much appreciation to Greg Harris, Vern Frederickson, Russ Ingham, and Dennis Johnson.

I also thank the many farms & organizations, like AgriNorthwest, the Oregon & Washington Potato

Commissions, Umatilla & Morrow County Commissioners, Umatilla Electric, RDO Equipment, Elmer's Irrigation, Nutrien Ag Solutions, IRZ Consulting, the Ports of Umatilla and Morrow, Ross-Brandt Electric, Inland Plumbing, and the City of Hermiston, and so many more!

Also thanks to U.S. Representative Greg Walden, who helped get the reversionary bill passed impacting HAREC. The continued support of State Senator Bill Hansell, State Representatives, Greg Smith and Greg Barreto.

All of you & so many more have helped to make HAREC one of the finest research and extension centers found anywhere.

I wish all of you the very best.

Thanks again!

Summer in the Horticulture Program

By Scott Lukas
Assistant Professor,
Horticulture

Summer is here, and the HAREC Horticulture program is in full swing!

This year we have our hands full with many field trials on watermelon, sweet corn, onion, broccoli, hemp, and a little potato work for fun.

Our trials are focused on ways to help the region maximize crop production with fewer inputs.

We are approaching this theme by testing parameters of soil moisture, nutrient and water use efficiency, sub-surface drip irrigation, seed treatments, scattered planting dates, plant grafting, and new cultivars. We have lots of exciting work this year that is keeping us on our toes!

Most importantly, this year the Horticulture team is fully staffed. We recently welcomed Logan Clark as a permanent program technician. Logan joined us all the way from North Carolina after he completed his Master of Science degree. He has hit the ground running and has been a great addition to the program.

We are also fortunate to have a robust team of full-time interns with Tim Gould (BMCC Precision Ag. program), Jared Farber (OSU intern), Adriana Ramirez (OSU/EOU intern), and Wesley Adams (part-time BMCC intern).



Feel free to stop by for a field tour and meet the Horticulture crew!



Director, Phil Hamm started the event off with introductions and appreciation to sponsors and supporters.

2019 HAREC Potato Field Day

One of HAREC's largest field day events, Potato Field Day, was held on June 26th. In spite of forecasted thunder storms and wind, it turned out to be a great day to tour field plots and hear the latest information on potato breeding, diseases, nutrient management, soil health and insect pests.



Morning food & beverages were sponsored by Adama. Adama also provided bottled water, company hats, koozies and fortune cookies.



Syngenta sponsored a buffet style lunch. Barbeque tri-tip, fresh watermelon, corn salad, spinach salad, rolls, and of course potatoes, were enjoyed by the participants.



(Left to right) Sagar Sathuvalli, HAREC Potato Breeder and staff Lora Sharkey and Peggy Carr.

Be sure to join us next year!

News from the Agronomy Program

By Ruijun Qin
Assistant Professor, Agronomist

Since joining OSU in September 2016 as the HAREC Agronomy program leader, I have been working hard to increase the program's impact on agricultural development through the implementation of a series of extension and research projects.

Currently, our team is carrying out multi-year projects on identifying nitrogen and potassium requirements for several potato varieties grown in the Columbia Basin. The varieties are Echo Russet, Castle Russet, Clearwater Russet, Umatilla Russet, Alturas Russet, Ranger Russet, and Russet Burbank. The findings of these projects will help growers to refine the nutrient management guidelines, help sustain potato production and ensure environmental safety.

Under conditions such as heavy wind, excessive nitrogen, and water application, cereal crops and grass seed crops in the Columbia Basin region may suffer from lodging problems.

This may not only affect crop production, but also increase harvesting costs, thus reducing growers' profits. To help solve the problem, we are conducting field trials for evaluating the effect of using plant growth regulators on



Lodged Blue Grass

alleviating crop lodging problems in the region.

In Eastern Oregon, potatoes and onions are the main high-value crops, each of which are usually planted only every three years in the rotation. Rotational crops for these crops are mainly wheat and/or corn. These have endured low commodity prices and drive growers' profits down.

Research is being done to test the adaptability of new crops and to increase the crop diversity. High-value crops which could help increase growers' profits and improve agricultural sustainability are being tested.

So far, we have tested adzuki bean, quinoa, teff grass, and millet. Except for quinoa, the crops have proven to grow in the region successfully.



Adzuki Bean Plant

In the 2018 field test, results found that production of adzuki beans were successful; up to 2,000 lbs. per acre. Plans are now being made to carry out a field study to stabilize production of adzuki beans and other pulse crops in the new season.

Typical soils in the Columbia Basin are coarse-textured soils (loamy fine sand and fine sandy loam) with low soil-water holding capacity and low soil organic matter. With the intensive field management activities such as fertilization, irrigation, and pesticide application, the soil health and crop productivities might be impacted, however very limited information is available in this region.



Biochar

Recently, the agronomy team completed a 2-year project on the effects of organic manure and biochar on nitrate leaching and soil quality. The data will help provide knowledge on soil health for growers and will be provided soon.

If you are interested in details of the agronomy program, please stop by the lab or contact Ray. ruijun.qin@oregonstate.edu

Running a Successful Lunch & Learn Seminar Series

By **Silvia Rondon**
Professor, Extension
Entomology Specialist

"Good understanding of each other's cultures is key to a productive unit."

This is the idea behind our popular "Lunch and Learn," series at OSU Hermiston Agricultural Research and Extension Center. Faculty, staff, and students have been sharing their journey to our unit and programs since we implemented this monthly get-together in early 2019.

These informal sessions take place during lunch and they increase our knowledge & understanding about what it took folks to get here.

Govinda Shrestha, Postdoctoral Scholar (Irrigated Agricultural Entomology Rondon Program), talked about his journey from his home in Nepal, then to Denmark to continue his education. Years later, he came to the USA to work at Montana State University and recently moved to HAREC. He has



been working as an entomologist for the last several years and is currently leading a project related to insects' movement.

Sagar Sathuvalli, Potato Plant Breeder, has been with OSU for over 10 years, working on several breeding and molecular projects. He is currently leading successfully one of the largest breeding programs in the nation.



Aymeric Goyer, Molecular Biologist, moved from France back in 2002 and now leads an ambitious program focusing on improving the nutritional quality of important crops such as rice and potatoes.

Tiziana Oppedisano, Postdoctoral Scholar (Irrigated Agricultural Entomology Rondon Program), recently moved from southern Italy. She comes with an excellent background on psyllids and leafhoppers. Her current project focuses on leafhopper and phytoplasmas.

Silvia Rondon, Entomologist, came from Peru; moved to the USA over 25 years ago and has

been passionate about insects since she can remember.



Each informal talk typically lasts about 30 minutes. They take place during lunch and have a less formal atmosphere than a structured training session or seminar. Co-workers from different teams get to meet and share their skills and expertise. It also serves as a sociable, collaborative alternative to traditional classroom-based learning.

Mark your calendar for upcoming seminars July 26, Aug 30, Sept 27, Oct 25, Nov 15, and Dec 13.



Oregon State University
Hermiston Agricultural
Research and Extension Center

2121 South First Street
Hermiston OR 97838
541-567-8321

<http://oregonstate.edu/dept/hermiston/>

Mission Statement

To advance scientific knowledge in agriculture, natural resources and biofortified crops, and support and educate our diverse local clientele and community in the areas of irrigated agriculture, plant breeding, natural resources, human health and youth development.